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*EFFICIENCY OF THE GERMAN SCHOOLS.**

I. School Buildings, Furniture, Apparatus, and Text-Books.
II. The Teachers' Profession, Character, Preparation, and Social Position.
III. Character and Quality of Instruction given, and manner of imparting it.

I.

THROUGHOUT Germany the buildings used for schools are almost universally old and massive, constructed of stone or brick, many of which were erected and occupied formerly by some government official or petty prince, as his schloss or castle. They have little pretension to architectural beauty or convenience compared with modern structures,—reminding one of prisons. They are insufficiently and otherwise badly lighted, being also wretchedly defective in ventilation. Americans can scarcely imagine how filthy these Germans schools are in this respect. Nothing prevents a general and permanent injury to the *physique* of the youth but the few moments' recess at the close of each recitation. To this cause the general abnormal condition of the eyes among German students is attributed. The school furniture is exceedingly plain and meagre. This consists of a plain plank desk sufficiently long to accommodate five or six pupils, who sit upon a plank of equal length, six to eight inches wide, with no backs save what the desks in their rear may furnish. Though the Germans

* Abstract of a Paper read before the Middlesex County Teachers' Association, April 3, 1873, by Nathaniel T. Allen, of West Newton, upon "The Efficiency with which the German Government carries into Execution its System of Education."

excel in the accuracy and beauty of their maps and globes, the German schools are quite meagrely furnished with these and other apparatus. These are usually kept in a room by themselves, to be taken out and used as desired; rarely are maps or charts permanently suspended upon the walls as with us. Even blackboards are confined to a single one of moderate dimensions, five by three feet, placed behind the teacher for his especial use. In the higher classes of the secondary schools there is generally a good working apparatus to illustrate the principles of the various branches of science. The text-books are fewer in number and generally inferior in character to ours, due in large degree to the system of imparting information by means of lectures, which is practised almost exclusively.

II.

Without exception the teachers are men of fine education, generally college or university graduates, highly esteemed in the community, and, being government officers, they are not under any local authority; this places them in a much more *independent position* than is the case with us. The Germans examine and elect teachers with far greater scrutiny than we; and then, with great freedom to pursue their *own methods*, they are held to a strict account for the *results obtained* with their pupils. Their salaries, though small, are, like all salaries in Germany, fixed; school inspectors and examining boards are invariably composed of practical teachers. No local authorities can interfere with them in the conduct of their schools, for it is considered that they know more of school management than any person not of the same profession. When too old to fulfil the duties of the school-room, they have assistants; or, if necessary, they are relieved entirely from the school work, and pensioned during life, as are their widows and children after their death.

III.

The method of imparting information in the schools is almost wholly by means of lectures, without question on the part of the pupils, who listen undoubtingly as to an infallible oracle, write in

their blank books abstracts of the lectures, which are examined, and the pupils questioned upon them, by the teachers. This method, so universally practised with children of all ages, tends directly to repress individuality and independence of thought, the lack of which is characteristic of the mass of Germans who leave school at fourteen years of age. This method, so closely pursued with lads whose rank and advancement depend entirely upon success with the abstracts, renders it a simple and easy thing to discipline the schools; hence German teachers in the United States, relying upon the same methods and influences to maintain discipline among their pupils, almost universally fail in their management of schools. The system, while admirably adapted to develop good and docile citizens of *despotic Prussia*, is quite as unfitted for democratic United States. It would undoubtedly greatly improve our schools if we could first secure competent teachers, and then introduce far more of the admirable lectures given in the German schools. Very few lady teachers are employed, nor is it probable they will be much increased in number for years to come, as few if any Germans believe the sex fitted by nature to teach, save in the most elementary classes. A large increase of cultivated and refined lady teachers would surely exert a most healthful influence upon these schools, the gentlemen being in excess of the lady teachers probably as ten to one. Undoubtedly we in Massachusetts have, for pecuniary reasons, gone to the opposite extreme in employing, according to the statistics, nine ladie to one gentleman in our public schools.

While the German system of instruction is very superior to our own in many particulars, it is decidedly inferior in others. Shrewd observers among German professors are convinced that our system, while giving far less of book knowledge, develops greater self-reliance and more manly independence of character.

Let us impartially examine and wisely adopt those features in the German system which are superior to our own, and only such.

NATURAL SCIENCE IN COMMON SCHOOLS.

MANY persons are scared by big words. Chemistry, Botany, Zoölogy, Natural Philosophy, Geology, Palæontology, etc., etc., are indeed formidable looking terms, but are they any more so than Arithmetic, Geography, Grammar, Orthography, etc.? Now this is about all there is of it. The difference is only in the fact that we are in the habit of using the latter terms more frequently than the former. There are no such great differences in the sciences themselves. There are intricacies in one as well as in another. There are simple truths easily comprehended in one as there is in another. The leading principles of the higher branches may and should be learned before the details and intricacies of the more common branches. A part of mathematical science is taught to the child three years of age; and yet a Buxton and a Herschel can find enough to puzzle their giant minds in the same science. Humboldt studied Geography all his life; a child of six years may study it.

A false idea of what constitutes *thoroughness* has blinded many teachers so that they can see scarcely beyond the spelling-book. They would have a child master each page in the book before turning to the next one. Are text-books to be the standard or measure of the pupil's attainments? What did John Stuart Mill say? Hear him. "To have a general knowledge of a subject is to know only its leading truths, but to know these not superficially but thoroughly so as to have a true conception of the subject in its great features; leaving the minor details to those who require them for the purposes of their special pursuit. There is no incompatibility between knowing a wide range of subjects up to this point, and some one subject with the completeness required by those who make it their principal occupation. It is this combination which gives an enlightened public, — a body of cultivated intellects, each taught, by its attainments in its own province, what real knowledge is, and knowing enough of other subjects to be able to discern who are those that know them better."

A teacher, *every* teacher, no matter how primary be the grade of school taught, should have a general knowledge, should know

the leading truths of every branch of the whole range of knowledge. He can impart this general knowledge in a very short time, if he has any energy at all. If one cannot, he had better quit the profession at once. A teacher's odd moments, his leisure time, if applied to this purpose, would soon place him on this higher level. Our County Institutes should provide teachers who would devote a portion of time in giving general instruction, not by lectures, but by actual recitations in Natural Science. Let every teacher be provided with a work on Botany. In two weeks a competent instructor could teach pupils how to use the book, could give the general principles of the science, so that they might go out into the fields and woods, and by actual practice soon acquire a power that they would not exchange for the privilege of listening to a thousand lectures on science, even though they were delivered by a Tyndall. The same may be said of Geology, of Chemistry, of Physiology, of Natural Philosophy, of Zoölogy. They are not to learn it all at school, nor at home. We do not wish to be misunderstood. We say that the *general* knowledge of all these branches can be attained in a very short time, and that by application they may be followed, then, to an unlimited extent. Why, in a few lessons one may learn to analyze a plant, and it will only take practice to be able to find the name of any plant he finds in flower. The structure and development of plants can be studied by any one. A few hours will be sufficient to acquire a knowledge of the arrangement of the strata of the earth, and then one can collect fossils and minerals, and his books will help him understand them. Chemistry is a little more difficult, but any one can devise simple apparatus, and, with a few simple and cheap materials, can go to work experimenting, and get the leading truths of the science.

Our lady teachers admire flowers, make bouquets and put them in their school-rooms, cultivate house plants—what new delights if they could see them in their scientific relations, could tell the children the names of the wild flowers they joyfully bring them. They perform a chemical experiment every time they make a fire in the stove. Making bread and soap are chemical processes. A very little study would show all these things in a new light. And so with the whole range of Natural Science.

But if these branches are to be taught in County Institutes, do not scare pupil teachers by examinations. Examinations are an abomination. Do not scare them, either, with the text-books. Here is a text-book of Botany. Look at the glossary; what a frightful array of technical terms. An instructor who would have his class set to work to learn all or any of these terms has no business as teacher. The great naturalists of the country don't know them all. They would go to the glossary in analyzing a plant. But many of these terms *are* learned, *all* that are necessary, and that in such a simple way that the pupil is not aware of it. They are learned by use. Let topics be assigned, outlines and classifications be put on the blackboard by pupils, not by the instructor. Let apparatus be constructed by the pupils themselves. Let the fossils and minerals be collected in the neighborhood; flowers brought in by pupils, and the analysis be the first lesson. Take a skeleton and charts for teaching Physiology, and let the pupils use them in naming the parts of the body.

Now, so much we have said about teaching teachers these Sciences. Many teachers, of course, have already studied them. This will help on the work, for they can help instruct the rest. But now for these subjects in the common schools. Of course they will not be taught in the same way that they are taught to teachers. Any subject is easily taught when the pupils become interested in it. How easy to interest children in the objects of Natural Science! They delight in collecting specimens. Books are not needed to teach children the truths of Natural Science. Objects, and such objects as they can gather themselves, together with a little effort on the part of the teacher, are all that are required. This teaching need not take up much of the time of regular studies. Let it be taught more as a recreation than as a task. The children will consider it recreation. We have taught in the country, and by a little effort have so aroused the interest of children that they would leave their ordinary sports to study science, would search by the hour for specimens, and bring them to us, and ask questions about them. The teacher will never need exercise much governing power when he once arouses such enthusiasm. It is much better than birch rods.

Almost every region has its fossils or minerals. The drift fur-

nishes specimens of various formations. The bowlders that are scattered over the whole of the Northern States, almost, furnish a great variety of granite, quartz, feldspar, mica, hornblende, etc. The Silurian, where it crops out, affords an abundance of fossils. Places which the casual observer would say contained nothing, when investigated will be found to be rich in specimens. There is no telling what one may find when he begins a scientific search.

Where no specimens can be found in the neighborhood, where there is nothing but alluvium, there it would be useless to teach Geology. Cabinets already arranged will not be found of much value. The children must themselves do the work of collecting, or they will take no delight in the study. But botanical specimens are everywhere found. The parts of the flower and their names may be learned by very small children; and it is just what will delight them. The older pupils may be taught how to use a key in analyzing plants. There are small works on Botany that can be had at a low price, and which bring the subject down to the capacity of the young. But only the oldest pupils will want such books, and their purchase should be optional. Should they show sufficient interest, let teachers urge upon them to get such books. The same may be said in regard to text-books on the other sciences.

Let the children collect insects, and the teacher mount them on pins in a glass case. (See articles in July, August, and October Nos. of National Normal for 1872.) They may make collections of the different varieties of wood, or of the various forms of leaves.

A knowledge of Chemistry and Natural Philosophy would enable the teacher to perform many little pleasing experiments illustrating the leading principles of these sciences. Why, the children themselves unconsciously perform experiments. What boy has not made popguns and squirt-guns, and carried flat stones with a circular piece of wet leather, illustrating atmospheric pressure?

Might not simple lectures in the morning, five or ten minutes in length, prove the most effectual remedy for tardiness? Some very beautiful and striking experiments can be performed at very little cost.

"Porter's Chemistry" will be found a useful book for the common-school teacher. With a few tobacco-pipes, old fruit-jars, etc., one may perform almost all of the experiments given in the work.

Happily the learned world is beginning to see the propriety of popularizing science. Note the efforts of Huxley, Tyndall, Youmans, and many others, to bring down scientific subjects to the comprehension of the young, and to open these fields to the investigation of all. We have advanced a great way since the time when the Bible was chained in the churches, and when none but a royal few had any business to know anything about the higher branches of education. The delightful fields where the flowers of science grow, are just as free to the humblest of God's children as they are to the favored few, who have hitherto monopolized them. The efforts of those scientists who are endeavoring to enlighten the masses by putting forth works on popular science, will be in vain, unless we give the rising generation the foundation principles of those sciences which they are attempting to popularize. How much more would these works be read by farmers, mechanics, and workingmen generally, if in their school days they had been taught the principles which these works embody, and had that love for investigation which such teaching imparts aroused in them. Why, one can scarcely take up a family newspaper but it has its column devoted to the results of scientific research. The readers of these papers would take an interest in this part, if it were not that it is almost a sealed book to them, simply because they are not acquainted with a few underlying principles.

Let us remember that the child in the cradle studies science, and not be alarmed by big words because they are applied to the study of those objects that are always around us and which concern most our happiness.

Such plans as we have been proposing will not be carried out by lazy teachers, those who teach merely for money, nor by those who teach for popularity. But honest, earnest workers for the good of humanity, will accomplish untold results.

The physical welfare of the people of this country demands the education of the young in Natural Science. The glory of

the nation and the happiness of its subjects demand this kind of intellectual culture. This is one of the live questions among educators. Let it be agitated until the prejudices of the people shall be overcome. There will be objections to the introduction of such subjects into the school-room by some parents, but they will be only from those who are yet in the backwoods. The teacher who is inspired with the love for the work, and has a little tact and energy, will soon be able to overcome all such prejudices.

What might not be done for science if the number of investigators were increased, as they would be if the proper interest were awakened among the young.

G. Dallas Lind.

USE OF TEXT-BOOKS.

I do not believe in a very early introduction of the pupil to the text-book. I believe in a thorough preparation of his mind for its use. I believe in teaching him how to use it. But when all this is done, I do believe in study, — earnest, close, profound, hard study. I think the tendency of modern instruction is to lecture the pupil to death. I do not believe in this endless talk, — this everlasting pouring-in process. You might as well attempt to fill a sieve by pouring in water, as to educate a child by talking. The true measure of instruction is not what you can give, but what the child can take, what he can appropriate, what he can make a part of his own mind. Education! What is it? A *leading* out; merely assisting the child to act for itself. Leading a child is not carrying it in your arms. When led, it goes mainly by its own efforts. So it is with the mind. The mind grows as it acts, as it thinks, — and no more.

It is easy enough to talk, and to talk pleasantly, — to interest children by talking. But this is no standard of good teaching. To awaken the curiosity, to stimulate a spirit of inquiry, to make children anxious to learn and willing to work, to form habits of correct thinking — this is the standard by which, as teachers, we must stand or fall.

The old style, and the one altogether too common at the present time, was to begin by teaching books, and to end by teaching books. In the beginning, the middle, and the end, it was words, words, words. The pupil labored, indeed, but mainly to fill his mind with useless lumber. This was an abuse of text-books; but it does not follow that they have no use. The pupil should be taught to use them properly; and then there is far more danger of his using them too little than too much.

ORDER OF INTELLECTUAL DEVELOPMENT AND GROWTH.

THIS development begins to be made manifest with the beginnings of attention. Before this, its activities are, as it were, rudimental only. There is the feeble and confused experience of pleasurable and painful sensations, blind instincts impelling to movements as aimless; but no definite experience of good or evil, and no distinct knowledge even of the simplest objects. Of this state, memory preserves no recollection, and concerning it imagination has no materials out of which to shape an image or conception. From this condition the mind awakens when some object attracts and holds its attention. The infant's power to know begins to be developed when it begins to attend. The idiot is awakened from its imbruted life by the patient appliances which invention, stimulated by love, employs to fix the eye and hold the mind. As soon as the idiot and the infant begin to notice, the vacant countenance for the first time assumes the expression of intelligence, and is lighted with the gleaming dawn of intellectual activity. Attention gives discrimination, and discrimination implies objects discriminated. The first objects distinguished are objects of sense. It is in the physical world that the soul lives for the earliest years of its activity; it is with this world that it is occupied and absorbed. The sensible objects that are first mastered are those which relate to its wants, and generally, so far only as they are related to these wants; first its appetites, then its affections and desires. With the discernment of these objects, in their relation to the sensibilities and desires,

begins also the direction of the active powers by intelligence. The sensations and feelings are referred to definite objects, they are restrained by discipline and habit, they are fixed upon one or another as an aim or goal of effort. The will must also come in, to elevate or degrade the affections in their moral life.

But though the attention is at first chiefly occupied with sensible objects, and these prominently in their relations to the sensibilities and practical wants, it is not wholly neglectful of the psychical operations and the psychical self. At a very early period the body is distinguished from the material world of which it forms a part, and the soul begins to be apprehended as diverse from the body, as soon as the purely psychical emotions, as the love of power and sympathy, or the irascible passions, are vividly experienced. Though the phenomena of consciousness, as distinguished from the phenomena of sense, are not so distinctly attended to as to be separately named or familiarly spoken of, yet a real apprehension of the soul as a special energy, capable of various psychical activities and the source of most important experiences, must very early be combined with the more forcibly discriminated apprehensions of sense.

As fast as the attention masters distinct objects, it must separate them into separable ideas or images, which are henceforth at the service of the imagination and the memory. These reappear in the occasional dream-life that begins to disturb what was hitherto the animal sleep of the infant. Memory begins to recall past experiences of knowledge and feeling. Recognition finds old and familiar acquaintances in the objects seen a second time. At a later period, imagination begins to imitate the actions and occupation of older persons, and furnishes endless and varied play-work for childhood, in the busy constructions of the never-wearied fancy; while it irradiates the emotional life with perpetual and inextinguishable sunshine.

Slowly, the rudiments of thinking, or the rational processes, begin to be learned and practised. The attention not only discriminates, but compares. As it compares, it discerns likenesses and differences in qualities and relations. These, it thinks apart from the individual objects to which they pertain. It groups and arranges, under the general conceptions thus formed, the

individuals and species to which they belong. To these activities language furnishes its stimulus and lends its aid. Inasmuch as there can be but a limited language without generalization, the infant or child is forced to think, by the multitude of words which catch its ear and force themselves upon its attention; each representing the previous thinking of other men, and even of other generations. But generalization is at best but a slow process, and the mind at first does as little as it can, entering into the meaning of words only just deeply enough to use them as instruments of its convenience or pleasure, and classifying and arranging the objects of matter and of spirit only so far as is requisite for its immediate purposes.

With classifying, are intimately allied the higher acts of tracing effects to causes and illustrating causes by effects. Then inductions are made by interpreting similar qualities and causes, as exhibited in experience and illustrated by experiments. The mind becomes possessed of principles and rules, which it applies in deductions both to prove and explain. The powers and forces of matter and spirit begin to be discerned, as the result of induction and deduction combined. The relations of these powers to their conditions and to one another, as well as to motion, time, and space, begin to be fixed and definitely stated, and the laws of matter and of spirit are ascertained in a wider or more limited range and application. Science arranges all beings and all events into the order of completed systems, by means of all the processes of thought; and the whole world of nature is recast into a new spiritual structure, under the relations by which thought decomposes and recombines its individual beings and events, as presented to observation under the relation of space and time. Moreover, adaptation and design are seen to shoot golden threads of light and order through the warp and woof of that otherwise pale and lifeless system o nature, which science reconstructs out of blind forces and fixed mechanical laws. The originating and intelligent intellect of the Eternal Creator and Designer is reached, as the first assumption and the last result of scientific thought.

Last of all, thought turns back upon itself, and critically analyzes all its knowledge, and its very power to know. It inquires

into and scrutinizes its acquisitions and its assumptions, and challenges its own confidence in its most familiar processes and beliefs. It seeks to justify to itself its acquired knowledge, its science, and its faith, by retracing, under the guidance of logical relations, every step it has taken, and every stage through which it has passed in its development and growth. It analyzes to the utmost minuteness, and abstracts with the extremest generality, till it would seem to destroy the vitality of the thinking agent by the keenness and refinement of its dissections. It lays bare the necessary assumptions, the primary and universal relations, which are acknowledged and acted upon in all observation, in all science, and in all faith. It returns home again from the unnatural course of its speculative criticism, and the constrained attitude of its critical and perhaps sceptical inquiries, to confide a second time in the knowledge and the faith which it could not but acquire and trust in its progressive synthesis, and which it now has learned to vindicate by its retrogressive analysis.

These critical and speculative processes of thought are reserved for but few of the race to prosecute. They are, however, the normal and the necessary consummation of the completed growth of the fully developed man.

THE INFLUENCE OF OUR SCHOOL SYSTEM ON NEW-ENGLAND CHARACTER AND ALL GREAT PUBLIC INTERESTS.

It has been said, and with some show of truth, that the only natural production of New England is ice, but that its manufactures include every conceivable thing, from wooden nutmegs to brains.

Anything combining utility with cheapness, from an apple-parer to a sewing-machine, is known the world over as a Yankee notion, and I wonder that no Biblical commentator has found a special reference to the universal Yankee in the text, "Man has sought out many inventions."

It is true that, by dint of industry, the scanty and sterile soil does yield some other products than ice, yet it is only by the

most persistent tickling with a hoe that it is made to smile with a harvest. Or perhaps I should rather say, using Yankee phraseology, — it is only by swapping a full equivalent of labor and dressing that the farmer secures a scanty return. The resources of New England, therefore, and those to which she is indebted for her prosperity, are not in the soil, but in the strong arms and fertile brains of her people.

Nay, even in the case of the one natural production, it was in the alembic of the Yankee cranium that ice was first converted to gold.

What had remained insoluble for purposes of pecuniary liquidation, from the beginning, yielded only to the alchemy of the Yankee brain.

Notwithstanding the transparency of ice, it was only the keen sight of our Tudors, Gages, and Hittingers that could see money in it.

That climate, soil, and other physical conditions should have produced marked peculiarities of character, might have been anticipated, though what they would be could hardly be foreseen. A weaker race than our fathers might have been discouraged, and, yielding to what seemed a necessity, might have dragged out a miserable life of poverty. In them, however, it stimulated to industry and perseverance, and developed a fertility of resource in an inverse ratio to that of the soil.

Somebody has said, that in certain parts of our country, a whiskey shop and lager-beer saloon only are necessary as the nucleus of a village. With the fathers of New England it was a church and a school-house. Around these two institutions clustered the settlers, and the germ there planted has developed into our present liberal system of public education.

From these spring our *material wealth*, our *social* and *political institutions*, and the *patriotism*, *public spirit*, and *intelligence* requisite to preserve them, and to advance the interests of a progressive civilization.

Humboldt has said that "science and manipulative skill must be wedded together"; that "national wealth must be based on an enlightened employment of national products and forces."

Our fathers may not have had this in view as the prime object

in founding our school system, but the results of New-England thrift have abundantly proved that educated labor *pays*, regarded even from a pecuniary point of view; that by utilizing all our material,— the brains of the masses, — we increase indefinitely national wealth.

This problem, then, was first solved in New England, and by our school system, — that the education of the whole people is the most important element in the material prosperity of a nation. It has become an axiom in political economy. There is no one question now exciting so much interest among educationists, both in this country and in Europe, as the inquiry how to bring our school systems into more direct relations with the industry of the people; and, though we may justly claim to have taken the lead in a general educational system, we are forced to admit that some of the nations of Europe have outstripped us in the practical character of the instruction imparted.

At the World's Fair in 1851, the palm of excellence in manufactures was, in nearly every department, awarded to England. Sixteen years later, when the nations again displayed the results of their skill and labor, England excelled only in ten of a hundred departments.

This excited so much alarm among the manufacturing interests of England, that parliament appointed a committee of investigation, and the report of the committee is equally instructive to us as to England. It is this: "That the success of the Continent was owing to its admirable technical schools; that no nation can excel in manufactures unless it provides facilities for scientific education for all that converts the mere workman into the artisan." It was this report, and the fact that so many of the foremen in our manufacturing establishments were foreigners, that led immediately to legislation in behalf of Industrial Drawing, under which technical schools are springing up in all our cities and large towns. It was seen that not only general intelligence, but technical knowledge and skill, add immensely to the material wealth of a nation. Such is the uniform testimony where "*brains* sit at the loom, and *intelligence* stands at the spinning wheel." But Mechanical Drawing is only the beginning of a course of Industrial training, which is to extend to every department of skilled labor. The establish-

ment of technical schools, whose advantages shall be accessible to every apprentice in any branch of human industry, has been strongly recommended by our Governor in one of his messages.

Such schools, where they are in operation, as in France, Belgium, and Switzerland, have already, says Prof. Waterhouse, — one of our ablest statisticians, — created a productive capital of many millions.

What, then, may we expect of them in this country, where so many great interests are only waiting for development?

But, not to dwell too long on this part of my subject, I have said that our social and political institutions, and the public spirit and intelligence requisite to preserve them, rest secure only on a general system of education.

A distinguished English writer on history in the early part of this century, attributed the lack of patriotism and of elevated sentiments, which he affirmed to exist among the people of his own country in the eighteenthc entury, to the fact that they had been engaged chiefly in the value of estates, the balance of trade, and profit and loss; and he goes on to say, that the only way in which this elevated sentiment of patriotism can be preserved among men whose minds are occupied with their bargains and their markets, the article they are to produce and the price they are to receive, is by the education of all, — by accustoming every man to interest himself in the concerns of his country, and thus giving him an idea of his social and political importance.

This was but *theory* with the philosophical Englishman. Has not the experience of the last few years in this country proved the practicability of preserving noble sentiments of patriotism, where peaceful industry and the pursuits of trade are the engrossing subjects of all classes? and was it not accomplished by the very means suggested by the writer mentioned? The quiet determination and patriotism sleeping in the breasts of the loyal millions educated in our Northern schools and colleges, were aroused by the first roar of the artillery of rebellion.

Never was there a more striking proof, in the history of the world, that peaceful industry, accompanied by intellectual, moral, and religious culture, do not render men parsimonious and effeminate, but rather fit them to become the truest and most liberal supporters, and the best soldiers of freedom and right.

The atmosphere of the workshop, the counting-room, and the stock exchange is too arid for constant breathing. Daily infusions from cultivated social life, from books and lectures, are necessary to health.

Who shall say how much the immediate vicinity of Cambridge has done to extend, elevate, and purify public sentiment in Boston? Neither the annual nor triennial catalogue contains the names of all the students educated *by*, if not *in*, our colleges.

And so, also, with our public schools. When the father returns to his family at evening, surrounded by his children, conning their daily lessons, he finds himself in a different world; and he is a wise man if he can answer all the questions that are puzzling the brains of the younger members of his household.

The common school, therefore, is not only the educator of the children between five and fifteen, but of the whole community. It is the nature of all good institutions, as well as good men, that "virtue goes out of them."

The indirect influence of our colleges is yearly recognized by honorary degrees, conferred on those who have attained excellence in some department of learning, outside the walls, but not without the aid of those institutions.

It is no less a claim of influence, on the part of our higher institutions, than a compliment to the recipients of the degrees. To many a man who never paid a tuition fee, or attended prayers in the college chapel, is old Harvard the alma mater, in a stricter sense than to hundreds whose sonship is chiefly evidenced by a scrap of parchment.

I know it is common to speak of men who have become distinguished, though they have not had the benefit of a college course, as self-made men; and this, in a limited sense, is just; but, I believe, as a class, they will be found to have as lively a sense of obligation to the great institutions that have furnished the best books in science and literature, as those more favored ones who have received instruction from the lips of tutors and professors.

If other proof were wanting that our schools and colleges do, in fact, educate the community at large to higher views and a juster estimate of life, it might be found in the fact, that the same brains that convert all our natural productions to gold, are not

satisfied till the gold itself, purged of its baser dross, is transmuted into wisdom, virtue, religion.

There is scarcely a college, an academy, an asylum for the blind, the insane, or the dumb, a hospital of any kind, or any beneficent institution, that is not a monument to the generosity of those who, by the discipline and knowledge obtained in our schools, have amassed wealth, without forgetting that the worth of the dollar consists in its exchangeable value for that which is more precious than rubies.

Hence those immense sums invested in institutions whose dividends stand accredited to the *world*, and whose accounts are audited and approved in heaven.

EDUCATION A MASTERY OVER TIME. — By the word education is meant the best training for the young with a view to their after life. We are at once brought face to face with the great question of time by this statement, what time can be given for training? Time is paramount lord of all progress. As soon as men have any time at their disposal over and above what is needed to get food, they employ it in making some advance towards a higher state of life, mental or bodily; that is, they employ it either in getting knowledge for its own sake, or for the sake of the advantages it brings. And as years pass on, there is much stored-up power which has been acquired in this way. Education keeps the key of this treasure-house. The treasure-house of time is barred and locked. Mankind have to wage a never-ceasing contest against time: first, for food and bare subsistence; then for the mastery over his more precious secrets, and to get the key of his treasure-house; and whether men make him do their bidding and give up his treasures, or follow him wherever he drags them, is no slight difference. It is the difference between being a slave in the world or a master. The progress of the world turns on this mastery over time. And this mastery over time, in its best and widest sense, is the best of education,— education is the master and keeper of time and his treasures, and all the main distinctions of man from man, and class from class, depend on it. For in a free country all classes are working classes, and the superiority of one class to another, in the long run, depends on the value of its work; and the value of the work depends on the capital, intellectual or other, required before the work can be done, and both intellectual skill and money, in the ordinary course of events, are the result of a mastery over time. And education gives this mastery. Each generation hands over much of its acquired capital to the next in this way. — *Thring; Education and School.*

Resident Editor's Department.

MEN AND WOMEN TEACHERS.

The School Committee of Newton voted to reduce the number of school districts in their town from eight to four, and that the same reduction be made in the number of male teachers. The only reason given was, that the substitution of female teachers for the discarded gentlemen would be a pecuniary saving to the town.

This radical change in the school system has called out much discussion and petitioning in the town, which, with its sixteen thousand inhabitants, distributed in eight or ten distinct villages each with its own post-office, churches, graded schools, etc., is quite unlike any other town in the State.

The "Teacher" is not the proper medium for discussing the local questions of any town even when they are educational. This matter, however, bears directly upon the educational system of our State, and, in the estimation of many, vitally affects the highest interests of our schools.

It is upon educational grounds that the question — the relative number of men and women teachers in our schools — should be discussed, and, if possible, settled. The people of Massachusetts demand the best schools possible for their children; and while they wish to practise true economy in all things, they will never refuse to appropriate money for any measure deemed of advantage to the schools.

It is not a settled question at all among educators and practical teachers, that children — boys or girls — should be more under the care of women than men teachers during the school-going age from six to sixteen. This is not a settled question; for while in every European country the number of men exceeds the women as ten to one, in Massachusetts nearly the exact reverse is true. So far as any discussion of this point has come under my own observation, whether in public or private, it has been *universally* conceded that the disproportion in Massachusetts is too great, largely accounted for by the fact that it has seemed to be a pecuniary saving to employ women rather than men teachers. How common is the remark made in the country-towns of Massachusetts, "We did not raise sufficient money to employ a good man teacher, and were obliged to take a woman." The interesting and valuable reports of Mr. George A. Walton, State agent, concerning the schools in the towns of our western counties of Massachusetts, tend to show that the schools in the outlying districts of our country-towns are inferior to those of twenty or fifty years ago, due in large degree to this wholesale substitution. Our most enlightened educators of the State, the Presidents of our Colleges, with George B. Emerson, Louis Agassiz, A. Bronson Alcott, Elizabeth Peabody, Julia Ward Howe, and others, if projecting a system of

public school instruction for the State, would probably allow two, possibly three, ladies to one gentleman, as the proportion among teachers; not a greater inequality, I am confident.

God has placed us in families; and the educating influence of father and mother is alike important with every child, — boy or girl. The careful observer may generally detect the unequal development in those children unfortunately deprived of the healthful, necessary influence of either father or mother. This question does not hinge at all upon the the woman question. If it is thought to, then the answer is, that we plead for a nearer approach to an *equality* of the sexes in the ranks of teachers. Explain it as we may, it is nevertheless true that, at present, women teachers alone do not and cannot generally exert so decided and salutary an influence upon children from ten to sixteen years of age in our schools, as gentlemen and ladies together. That the community so believe, is shown by the fact that, almost without exception, every High and Grammar School, as well as all academies and, seminaries, whether for one or both sexes, is presided over and pretty largely taught by men. The Boston Latin and English High Schools are taught exclusively by men. In the opinion of many, both those schools would be greatly benefited if accomplished lady teachers were introduced. Again, without looking to Europe, who have been and are now the great teachers and educators in our own country? In my opinion, ladies are coming and should come more and more to the front; but as few young ladies, when preparing for or entering upon the duties of the profession, anticipate or desire to teach more than two or three years at most, how can we expect such results from their instruction as from gentlemen who prepare for the profession as for a life-work? In my opinion, every child of average ability in our Massachusetts schools between the ages of ten and sixteen should come under the direct personal influence and instruction of genial, wise, and highly cultivated gentlemen teachers, at least for one course of recitation each day. As stated by Mr. Ware in his admirable address before the Boston city authorities on the Fourth of July last, our country is almost entirely ruled by politicians, and nearly all public offices are filled by demagogues, from the Senate Chamber to the School Committee; and herein is the great difficulty, which the teachers should earnestly endeavor to remedy. In Germany, boards of education, school committees, or directors are always constituted from *practical teachers*. As soon would a company of farmers or merchants be selected to examine or control a medical, law, or divinity school, as that the educational interests of the public schools be placed in the hands of others than educators themselves. This is a matter which concerns the self-respect and professional pride of teachers, and the educational interests of our State.

Our Massachusetts Board of Education, with their secretary, consists of eleven estimable gentlemen, the most of them lawyers and clergymen actively engaged, each in the duties of his own profession, with little time, and perhaps less inclination, to study the great problems of the time, relating to the education or right development of the human being, the highest and noblest

of God's creation; nor has one of them, so far as I know, taught in our public schools within the last sixteen or twenty years. Considering this condition of our educational forces, it is surprising that, instead of the German system of public instruction being superior to our own in *eighteen* particulars, as Dr. Northrup affirms, it is not superior to ours in all respects. We are verily at fault in not insisting that a larger number of ladies and gentlemen be placed upon our boards of education of state, city, and town, who have made the art of teaching and science of education their chosen and professional study.

If the above thoughts, uttered in the interests of the teachers and schools of our state and country, serve to draw attention to the subject, my object will be attained.

NATH'L T. ALLEN.

West Newton, July 9, 1873.

MASS. CLASSICAL TEACHERS' ASSOCIATION.

[Concluded.]

PRESIDENT ELIOT, OF HARVARD UNIVERSITY,

Considered it inexpedient to require the study of Greek of all pupils as a requisite for entering college. He thought there should be an option between Greek and German or French; assented to most of the positions taken by Mr. Collar; and advocated the study of German as essential to a complete education, in at least five important professions.

The Recording Secretary read the following letter from Prof. Goodwin, of Harvard College: —

CAMBRIDGE, April 9, 1873.

My dear Sir: — I am very much obliged to you for your invitation to the Association of High School Teachers (on Saturday); but my extra work this week keeps me away.

As to the question of substituting German for Greek in the preparatory course of study for boys who are coming to college, I cannot for a moment admit that there *is* any such question, however much certain people may persuade, first, themselves, and then others, that it exists. The only question that is really worth discussing, and the only one which so far as I can see is practically under discussion, is one which I think very few educated men in this country would be willing to face squarely: this is, whether we are to give up classical study as the basis of a literary education. In my opinion (and it is an opinion, I may add, which almost amounts to a certainty to my mind), the substitution of German, or French, or Spanish, or any other modern language, for Greek, even as an alternative, would prevent a large number of those who would otherwise be our best scholars, from ever beginning the

study of Greek. I know from experience the difficulty of obtaining good instruction in Greek in small towns, even in New England ; and that difficulty would soon become an impossibility, if there were any alternative presented. I am sure that under such circumstances I should have come to college myself without Greek ; and the authority of the college would be used to quiet all misgivings in the minds of parents or teachers by those who have the financial management of our country schools. It cannot of course enter any one's plans, that Greek will be taught in college to those who come without it. That will never be done. With the study of Greek would be swept away all the discipline and all the culture which that study supplies as a sound foundation at the beginning, and as a refining influence through the whole course, of a liberal education. How much we owe to that discipline and that culture might perhaps be better appreciated, if it should ever be abandoned, than it is now when it is a matter of course. I do not think that Latin could maintain its hold ten years as a basis of education, if Greek were withdrawn. A distinguished German scholar used to compare the Greek literature to the sun, shining by its own light, and the Latin to the moon, reflecting the sun's light after sunset. One is indispensable to the other ; and above all, the sun must not be extinguished. The inferior character of the Latin in respect to discipline, — not in cultivating the memory (for which Choctaw would amply suffice), but in giving exactness to thought and the expression of thought, — coupled with the fact that Latin literature is chiefly an imitation of superior Greek models, would make the position of Latin, if it were left alone in the responsible part which it now holds jointly with the Greek, a peculiarly difficult one to maintain ; and I should feel that more than half of the arguments by which I could defend its present position would cease to apply to it. In fact, I should confidently expect to see a practical end of all classical scholarship in this community, if I believed that our colleges could ever be so blind to the purposes for which they exist, as to take the first step in so fatal a direction.

I cannot conceive how any classical teacher can take any other view of the question as a whole. I can hardly bring myself to believe that any one who really understands both Greek and German can seriously talk of substituting the latter for the former. You may desire to kill Greek and to exterminate classical learning ; but don't insult Greek by proposing such a "substitute." No one values German more than I do ; no one thinks it more important to an educated man. But who that knows the language at all does not know that any dunce can learn it in a year so that no further discipline is possible from the study of it ? I speak of it merely as a language to be learned for reading and grammatical analysis (including speaking, if opportunity offers) ; as to hard reading, that can be found in any language in any amount, and the chief reason why German has more than English is that German prose writers are apt to take less pains to write in a plain, perspicuous style, — a character which certainly does not recommend German for use in linguistic education. Of course, no one would dream of studying German philologically without a knowledge of Greek and Latin, as well as other ancient languages,

as a basis. Indeed, I cannot believe (until I hear of the actual existence of such a person) that any one ever proposed German as a substitute for Greek in literary education, unless he either wanted to destroy the influence of Greek and overthrow the present system of classical education altogether, or else had studied German long enough to find it rather difficult at the beginning, and imagined that it would continue so after the elements were mastered. I will add here, that the most impressive remarks to which I have listened for many years on the value of Greek and Latin as a basis of education, I heard a few days ago from a distinguished mathematician, Professor Benjamin Peirce. In fact, as all classical teachers (I trust) fully appreciate the value of mathematics as an essential complement to classical training, so among men of science, and especially mathematicians, will be found some of the strongest defenders of classical study as a companion to the stricter discipline of mathematics.

I remain, my dear sir, yours very truly,

W. W. GOODWIN.

W. F. BRADBURY, Esq.

PROFESSOR AGASSIZ

Presented his views, and asserted that all attempts to prescribe for any school as a whole the studies to be pursued, must be given up in accordance with the demands of the age, and all studies made elective.

MRS. MARTIN

Could contribute a bit of actual experience.

Ten years ago a class of girls, High School graduates, already good Latin scholars, were very anxious to study Greek. They were urged to take German instead, though left to their own choice. They decided in favor of German, and all of them in the end were satisfied of the wisdom of their choice.

MR. TETLOW, OF NEW BEDFORD,

Cordially sympathized with the general tendency of Mr. Collar's remarks, but took exception to some of his arguments and suggestions. Mr. Collar did not seem to him to have established satisfactorily all his positions. He (Mr. Tetlow) admitted that the advantage of the study of Greek over that of German as a means of mental discipline, is not commensurate with the greater amount of time required for mastering it, and was also of the opinion that students generally do not acquire sufficient familiarity with the Greek language to read it without the aid of the dictionary. He did not believe, however, that this lack of facility in reading Greek disqualified them for appreciating the excellence of the Greek literature, any more than the inability of the chemist and the mineralogist to analyze substances without the proper instruments disqualified them for investigating the laws of nature. He thought, therefore, that every liberally educated man should have a sufficient acquaintance with Greek to enable him, with the aid of the proper instru-

ment, *i. e.* the dictionary, to read in the original those works which are acknowledged models of literary excellence.

With reference to the relation of Greek to English, Mr. Collar seemed to him to have underrated the etymological value of a knowledge of the former. To say that five per cent only of the words in our language are of Greek origin, whereas sixty per cent are of German, and to argue from this that the study of German is more valuable on etymological grounds, is to overlook the real basis of comparison: this being not the *number*, but the *kind*, of words. No English-speaking person needs etymological aid to enable him to understand the meaning of such words as can, shall, will, hat, finger, home, and the like, which are fair samples of the words obtained from German sources; whereas etymological aid is invaluable in enabling the student to understand and retain the meaning of such words as amorphism, prophylactic, azoic, endogenous, etc., which fairly represent the character of the words derived from the Greek. Words of Greek origin form the unfamiliar and difficult part of the reading vocabulary of educated persons, so that some knowledge of this language seems an almost indispensable part of their mental furnishing, while the need of German is, so far as etymological aid is concerned, scarcely felt.

Mr. Tetlow concluded by recommending a reduction in the amount both of Latin and Greek at present required for admission to college, and a substitution of German and French for the parts thus omitted. He would remove from the present requirements four books of the Anabasis, six books of the Æneid, and four orations of Cicero, and thought that the time thus gained would suffice to give the graduates of the preparatory schools a fair knowledge of the grammatical principles of both French and German, and to enable them to read one or two classic productions in each language.

On motion of Prof. W. P. Atkinson, this question was laid on the table.

The 7th topic, "Natural History, — what to do, and how to do it," was then taken up.

PROF. AGASSIZ

Said that natural history was not as a general thing studied as it ought to be. The first trouble in this country was that there were no books. The books used were written by foreigners, and as a matter of course contained descriptions and illustrations of animals not familiar to either scholars or teachers. First of all, then, there ought to be books adapted to this latitude and longitude, with illustrations and descriptions of familiar objects in natural history. Specimens, too, should be provided for each pupil. Teachers could probably tell a cow from a grasshopper, could state *some* of the differences, but it was not so easy a matter to point out all the differences. Much more difficult and not less important is it to note carefully the points of resemblance. Prof. Agassiz took occasion to explain the formation of the institution on Penikese Island. He proposed to receive as pupils those who were engaged in teaching natural history, or were preparing to teach it. He closed by asking those present for any suggestions in relation to the terms of admission to this new institution.

MR. E. W. CLAYPOLE, LATE OF BRISTOL, ENGLAND,

Made a few remarks upon the method of teaching natural history adopted in England, based upon the principle of teaching rather from nature than from books. Naturalists' societies exist in every part of the country, which form, as it were, nurseries for young students, and which veterans in the cause are equally willing to join. A part of the scheme of these institutions is to plan excursions during the summer months to places interesting to one or more of the sections into which these societies are divided, — to the geologists, the botanists, the entomologists, the microscopists, or even the archæologists. These involve little expense, and can be carried out in the afternoons of days whose mornings have been occupied by business or professional labor. A party is collected with some definite object in view, and the hours are pleasantly spent until daylight fails, when a simple tea at some village inn usually completes the excursion. The materials thus collected, and the information obtained during summer days, are turned to account in short papers written by various members, and read at the meetings of the society during the winter evenings. This system prevails in all parts of England, and some of these field naturalists' clubs count among their members men well known to the world in their various departments of science. It has also been adopted by not a few of the large schools, and in some instances the pupils issue an annual report of their proceedings for the past twelve months. In the universities, too, the same plan has often been adopted, and the field excursions of that most enthusiastic and successful teacher of zoölogy, Edward Forbes, of Edinburgh, will never be forgotten by those who took part in them or witnessed them. He would lead as many as two hundred students afield to study the creatures in their natural habitats, rather than teach only by dry routine from dusty skeletons and dried specimens in his laboratory.

Prof. Agassiz added that the practice had given rise in England, where this mode of teaching was better carried out than anywhere else, to a literature the like of which could not be found in America, — a literature consisting of books for the country, the seaside, etc., companions of a holiday excursion.

The sixth topic was taken from the table, and

PROF. ATKINSON, OF BOSTON,

Opposed the substitution of German for Greek as a requirement for admis sion to college. He believed that every student should take his own course, and there should be as many doors for admission to college as courses of study. In place of an examination in Greek or German the candidate ought to be allowed, if he chose, to bring a bird and state what he knew about it, or a flower to analyze.

The greatest obstacle now remaining to the progress of true liberal education among us, is the requirement of a knowledge, or rather the pretence of a knowledge, of the Greek language on the part of all young men presenting themselves as candidates at our colleges, as an absolute requirement for

admission. Nothing is doing so much to vitiate and render nugatory the education given in our High Schools at the present moment as this obsolete requirement. If it promoted a real study of the Greek language among us, and resulted in any real general knowledge of Greek literature, it would be something; but it is notorious that it does not, but simply leads, on the part of the great majority, to an unwholesome cramming of Greek for the simple purpose of passing the examination, — a cramming which pretty much spoils the boys' school education.

The recent statement of Sir John Duke Coleridge in regard to the English boys' education is true *a fortiori* of our own: "Boyhood, youth, and early manhood," he says in a recent address before the Edinburgh Philosophical Institution, "were in fact consumed with most of us in *not* acquiring any real or competent acquaintance with Greek or Latin literature, and in carefully abstaining from any attempt to acquire anything else." He goes on to say that the days of that system are numbered, and that, for his own part, if he could prevent the result by a single word, that word he would not utter.

The testimony is valuable, coming from an Oxford graduate of such eminence. This change has just been actually carried out by the great University of London, an institution which, far more than Oxford, represents the nineteenth-century education of England. In a recent issue of the "Pall Mall Gazette" I find the following: —

"A resolution of the senate of London University, passed a few days ago, and announced in the newspapers in a paragraph of two lines, carries with it consequences of some significance as regards the secondary and higher education of English boys. Hitherto all students at matriculation have been required to pass an examination in Greek, Latin, and English, and either French or German, besides the usual elementary mathematics, history, and physics. Mr. Hutton's motion in the senate, carried, we are informed, by a majority including the chancellor (Lord Granville), Lord Derby, and Mr. Lowe, will enable a candidate to matriculate, so far as the linguistic portion of the examination is concerned, on passing in Latin, English, and any one of the three languages, Greek, French, or German, which he may select."

The new plan goes into operation at the very next examination in June. "To understand the full importance of this decision, it must be borne in mind that candidates are admissible at the age of sixteen, and that nearly one thousand young men present themselves every year." The London University is exclusively an examining body, receiving candidates from schools and other colleges in all parts of the country, and its examinations are held in the highest estimation for their thoroughness and entire impartiality. A very large number of young men go up simply to obtain the entrance examination certificate, which is accepted by a great many other examining bodies: *e. g.* the medical schools, the college of surgeons, the council of military education, etc., in lieu of their own entrance examination, or as a substitute for certain preparatory studies. The effect of this decision on the part of the authorities is likely to be as wide-spread as it will be wholesome in liberating English schoolboys from the incubus of this relic of sixteenth-century ideas. "Nothing has done more," the "Gazette" goes on to say, "to injure the minor Gram-

mar (*i. e.* classical) Schools, and to keep down the level of intelligence in them, than this pedantic fiction that Greek and Latin must needs be the staple of a liberal education in all circumstances. A very heavy price has been paid in time, labor, and teaching-power for the slender and pretentious knowledge of Greek which is attained by the boy in one of the humbler Grammar Schools." For "humbler Grammar Schools" read American High Schools, and every word is true of this country.

In the higher examinations of the London University, for the degrees of master and doctor, Greek will be required in arts alone, but not in medicine or science.

Perhaps, in looking about for substitutes, a timid word might be said, if there were space, in behalf of the English language and its literature, studies at present almost unknown among us; particularly if that eminent savant, Mr. De Candolle (quoted by Galton in the last Fortnightly Review), is right in his prediction that "English, within the next fifty or one hundred years, will be the dominant language of the world, and the one into which the more important scientific publications of all nations will, as a matter of course, be translated. It is not only that the English-speaking population will outnumber the German and the French as these now outnumber the Dutch and the Swedes, but that the language has peculiar merits through its relationship with both the Latin and the Teutonic tongues."

It can hardly be said that these peculiar merits have yet been discovered, to judge by the kind or amount of systematic and scientific attention paid to the study in our schools and colleges; but in the light of all the results of the labors of English and continental scholars, is it not time that our mother-tongue should take a somewhat higher rank as a subject of systematic instruction? It might be suggested, too, that its literature contains several works which it might, perhaps, be profitable for boys to read during the time they now spend in school in *not* learning to read Cicero and Xenophon. Would it not be worth inquiring, what amount of knowledge of the English language and of the English literature (which by foreigners is sometimes thought to be worth reading) should reasonably be required hereafter of young men of seventeen, as a preparation for a college education? I have good reasons for believing that it is more than could at present be obtained.

When classical studies shall cease to be abused as a whetstone on which to try to sharpen boys' wits, but shall be left to be pursued by minds that love them and can profit by them, I have no doubt that the much-to-be-desired result will follow, that we shall have among us a very sufficient number of real classical scholars, — a result which can hardly be said to be attained by the present system.

REV. MR. COWLES, OF IPSWICH,

Spoke strongly in favor of retaining Greek as a requisite for admission to college. On motion of Mr. Williston, of Cambridge, the vote was taken upon the question, "Ought the requirements for admission to college be modi-

fied so as to allow a candidate to elect whether he will pass an examination in Greek or German?" Yeas, five; nays, six.

Mr. Parsons, of Waltham, offered the following: —

Resolved, That it is the opinion of this meeting, that an option should be allowed between Greek and some modern language in the requirements for admission to college.

This resolution was adopted by a vote of ten to three.

At one o'clock the Association adjourned.

W. F. BRADBURY, *Rec. Sec'y.*

COURSE OF STUDY IN THE SIXTH AND FIFTH CLASSES OF ONE BOSTON GRAMMAR SCHOOL, AND THE DAILY PROGRAMME OF THE SIXTH CLASS.

Reading. (Hillard's Fourth Reader.) First term (five months), forty lessons. Second term (five months), complete the book. Commit to memory lessons 10, 35, 60, 73. Pronounce words on 32d page.

Spelling. (Worcester's Spelling Book.) First term, seventy-five pages. Second term, to 109th page.

Writing. First book, September, October, November, December. Second book, January, February, March. Third book, April, May, June. Writing lesson not exceeding forty minutes, the first exercise in the afternoon. Four lessons a week.

Geography. (Warren's Primary.) First term, oral lessons on the subject embraced first part of book, and maps of Hemispheres. Second term, North America, United States, New England, with maps of school-room, school lot, vicinity of school. New England separately and in groups.

Grammar (oral). First term, omitted. Second term, noun, article, adjective. Distinguish these in reading book. Practice in use of capitals. Two exercises a week in Grammar, not exceeding fifteen minutes each.

Mental Arith. (Eaton's.) First term, Sec. 1, and review tables, on pages 162, 3. Second term, Sec. 2, and review tables.

Written Arith. No text-book. First term, notation and numeration of numbers of six figures. Addition of five numbers, not exceeding thousands. Subtraction of numbers not exceeding thousands. Multiplication of thousands by units. Division of thousands by units. Practical questions in small numbers at every lesson. Second term, notation and numeration of numbers of six figures. Addition of numbers of unequal number of figures, not exceeding five. Substraction of numbers of six figures. Multiplication of thousands by tens and units. Division of thousands by two figures. Practical questions in small numbers at every lesson. Simple questions in Reduction in Dry and Liquid Measures and Time.

Slate Exercises. Sentences from dictation. Copying from book. Lessons in making figures. Writing letters once a week.

Music. Singing from Mason's charts ten minutes each day, immediately after opening school in the morning.

FIFTH CLASS.

Reading. First term, forty lessons. Second term, complete book. Pronounce all the words on the 32d page. Commit to memory lessons 20, 64, 68, 78, and on 197 page.

Spelling. First term, from page 109 to 137, and English abbreviations from 163 to 167th page. Second term, from page 24 to 109.

Writing. First book, September, October, November. Second book, December, January, February. Third book, March, April. Fourth book, May, June.

Composition. Letters on paper to be sent to master once a month.

Geography. First term, New England, Middle Atlantic, and Southern States, drawing maps of New England and Middle States separately and in group on slate and blackboard. Second term, Western States and Territories, and review maps of Hemispheres, North America, and United States Draw maps of Southern States on slate and blackboard. Each map study should be first from the outline map and afterwards from the book. Map questions should be recited from open book. Descriptive Geography to be read only for conversational lessons.

Grammar. First term, Noun, Adjective, Pronoun, Verb. Second term, Adverb, Preposition, Conjunction. Attention given to correcting errors in speech of pupils. Write sentences on slate illustrating parts of speech. Use reading book for distinguishing parts of speech. Two exercises a week in Grammar not exceeding fifteen minutes each.

Arithmetic. Mental Arithmetic sections 3d and 4th, and review tables on pages 162 and 163.

Written Arithmetic. Notation and Numeration of nine figures. Addition of seven numbers not exceeding six figures each. Subtraction with numbers of nine figures. Multiplication of numbers of six figures by numbers of two and three figures, with ciphers in both multiplicand and multiplier. Division of numbers of six figures by numbers of three and four figures. Simple practical questions involved in one or two operations.

Fractions. Integers and mixed numbers reduced to fractions. Fractions reduced to integers or mixed numbers. Fractions reduced to higher or lower terms. Addition of fractions having a common denominator, or that can be mentally reduced to a C. D. Subtraction of fractions. Fractions multiplied by integers, mixed numbers, and fractions. Division of fractions by integers, mixed numbers, and fractions. Simple practical questions in fractions.

Decimals. Notation and numeration of decimals of six places. Addition, Subtraction, Multiplication. Division of decimal of three places. Combined with Interest.

Reduction. Dry, Liquid, Linear measures and Time.

Vocal Music. Singing from chart and book fifteen minutes each day ex-

cepting Wednesday and Saturday. Music charts, second series, review from one to twenty and advance from twenty-one to forty. Complete half of third music reader.

SIXTH CLASS.

Monday and Thursday. Tuesday and Friday.

From 9–9.20 opening exercise and singing from the chart. From 9.20–9.35 2d division, mental arithmetic. 1st division, study spelling. From 9.35–9.55 1st division, recite spelling. 2d division, study spelling. From 9.55–10.10 2d division, recite spelling; 1st division, slate lesson. From 10.10–10.25 1st division, mental arithmetic; 2d division, slate lesson. From 10.25–10.30 prepare for recess. From 10.30–10.45 recess. From 10.45–11.20 2d division, reading. 1st division, prepare written arithmetic. From 11.20–11.50 1st division, reading. 2d division, prepare written arithmetic. From 11.50–12 examine slates and dismiss.

P. M. *Monday and Thursday.*

From 2–2.40 writing. From 2.40–3 1st division, maps. 2d division, geography. From 3–3.10 physical exercises. From 3.10–3.30 1st division, geography. 2d division, maps. From 3.30–3.50 sentence from dictation. From 3.50–4, singing and dismissal.

P. M. *Tuesday and Friday.*

From 2–2.40, writing. From 2.40–3, 1st division, letter writing. 2d division, geography. Friday reverse the order. From 3–4, sewing.

TIME OF EACH EXERCISE.

A. M. — Mental arithmetic, forty minutes; written arithmetic, thirty minutes; spelling, thirty minutes; singing and opening exercises, twenty minutes; reading, thirty minutes; recess, twenty minutes; exercise on slates, ten minutes; total, one hundred and eighty minutes — three hours.

P. M. — Writing, forty minutes; geography, forty minutes; physical exercises, ten minutes; sentence from dictation, twenty minutes; singing and dismissal, ten minutes; total, one hundred and twenty minutes — two hours.

A. M. *Wednesday.*

From 9–9.20, opening exercise and singing from the chart. From 9.20–9 40, tables recited in both divisions. From 9.40–10.5 1st division, written arithmetic. 2d division, reading. From 10.5–10.30 1st division, reading. 2d division, written arithmetic. Recess. From 10.50–11.10, both divisions, study spelling. From 11.10–11.30, both divisions recite spelling. From 11.30–12, drawing in both divisions.

A. M. *Saturday.*

The same as on Wednesday before recess. After recess — 11.10 both divisions study spelling. From 11.10–11.30, both divisions recite spelling. From 11.30–11.50, explanation of examples on the board, or maps drawn on the board. From 11.50–12, placing and dismissal.

C.

February, 1872.

EXTRACTS.

THE ERA OF METHODS. — We have fallen upon the era of methods in American education. During the last twenty years, our system of public instruction has been groping over the perilous bridge that leads from empiric to scientific methods; groping often in a dense fog, in the face of all the foes that can be summoned by popular ignorance and prejudice, led by people whose sole interest is to keep things as they are. It was natural that this examination of methods should begin at the base of primary instruction, analyze the mind of the child, and learn to bring it face to face with knowledge. That examination has brought us upon the highway to great and successful changes in our mental school discipline. Now we approach the more complex and important question of Methods in Moral Instruction. It is to a careful study of methods and a strict adherence to practical and natural ways of shaping character in the school-room, that we must look for a solution of this vexed theme. If the American people can be kept away from the fierce sectarian conflicts precipitated by the ultra-ecclesiastical and the ultra-secular parties in school affairs long enough to get their eye on a few principles and mature a few methods, we may hope to achieve all that wise men can reasonably expect of moral training from the state, and reconcile to our common-school system all except that impracticable squad that is the chronic gadfly of Republican society.

WHAT IS THE COMMON SCHOOL? — We cannot understand the real nature of this problem of Methods of Moral Instruction until we rid our minds of a huge drift of vague idealism concerning the province of the common school. In our American enthusiasm for popular culture, we are perpetually forgetting that the aim of our common system of state instruction is neither to develop a scholastic class, nor to work up our young friend, Jonathan junior, into a seraph. The only ground on which we can take the people's money for public instruction is that the common school is the corner-stone of our national order of Republican society. The common school-house is not a manufactory of scholars or saints, but of good American citizens. George Washington and Abraham Lincoln were not scholars; Ben. Franklin and Andrew Jackson never claimed to be saints; but they were all, in characteristic ways, excellent types of American citizenship. To make good American citizens of American boys and girls, we have the right to do everything a wise Republican statemanship may dictate. To make scholars, in the university sense, or to develop proselytes to any church, we have no right to appropriate a dollar of the people's money. Scholarship and sanctity alike are to be dealt with in the people's school just in the degree and to the extent that they minister to a lofty and progressive ideal of American citizenship and American character. — *Rev. Dr. A. D. Mayo.*

INTELLIGENCE.

PERSONAL.

R. F. LEIGHTON, for several years principal of the Melrose High School, has resigned that position for the purpose of spending three years in Leipsic, Germany, continuing his studies at that University. Mr. Leighton has often enriched our pages with choice thoughts; and we hope he will not forget our readers while acquiring material for fresh usefulness upon his return.

J. S. BARRELL, of Lewiston, Me., the past six years, formerly of New Bedford, has been elected principal of the Grammar School in Lawrence, succeeding Mr. Brewster, whose resignation proved to be more than a rumor, as intimated last month. Few men have had so good a record as Mr. Barrell, and none deserve a better. We are pleased to welcome him once more to a place among the Massachusetts teachers.

MR. CHAS. S. LAZELLE has been elected principal of the Lawrence High School. Mr. Lazelle was teaching as submaster in the New Bedford High School, at the time of his election, in which capacity he was very successful. He went from Bridgewater Academy to New Bedford. He is a graduate of Brown. We congratulate the school board upon so fortunate a selection. Mr. G. E. Hood, superintendent of the schools of Lawrence, is hereafter to devote his entire time to school duties at a salary of $3,000.

WM. T. LAWTON, a recent graduate of Harvard, succeeds Mr. Lazelle in the submastership of the New Bedford High School.

MISS EMELINE PARSONS, principal of the Springfield Training School, has resigned; and Miss Mary Kneill, a graduate of the Westfield Normal School under Mr. Dickenson, is elected to the position at a salary of $850.

LOUIS H. DECKER, of Newton Centre, has returned after a year's successful experience in a New York school. We hope he may be retained in our own State.

JOHN B. GIFFORD, of the Westport High School, has resigned, to continue his studies.

WM. H. CROCKER, of Randolph, has resigned the position of grammar master on account of failing health. Mr Crocker has been successful and popular in his field of labor.

LORENZO B. GRIGSON, of Foxboro', leaves the Grammar School in Foxboro', where he has been the past year, to take charge of the Randolph Grammar School.

JAMES H. LEONARD, of Bridgewater, for two years the successful principal of a Grammar School in Weymouth, has resigned, to continue his studies at Oberlin.

EDWARD P. FITTS, of Walpole, is teaching the High School in Plympton.

M. W. D. HURD has just closed a term's labors with the Dartmouth High School.

MISS MARY E. HAMMONS, of Haverhill, valedictorian at Bridgewater, goes to Middleton, R. I., as teacher.

MASSACHUSETTS.

BOSTON. — Mr. Waterman, sub-master in charge of the Washington Village School, which is now to be organized as a Grammar School, has been elected master

of the same. Mr. Waterman is a graduate of one of the State Normal Schools, and a teacher of extensive and successful experience.

THE Grammar School over which Mr. Jameson has so long and pleasantly presided, has been discontinued for want of sufficient pupils to warrant its continuance, owing to the formation of new districts, each of which has encroached upon this. Mr. Jameson received a most gratifying complimentary vote upon the first ballot for master in Washington Village. His gentlemanly withdrawal in favor of Mr. Waterman, was in striking contrast with the spirit of the age. It is pleasant to know that there remains true courtesy in some of the ranks of life.

MR. HAM has been elected to the mastership of the Lincoln School, made vacant by the transfer of Mr. Clark to the Gibson School. Mr. Ham is well fitted for the responsible work before him, and is an honorable addition to the board of masters in the city.

THE school exhibitions were never more carefully arranged or more fully attended than this year. We cannot notice them all, though we should be pleased to do so ; and to select a few, when all were so meritorious, would be invidious.

MR. HASKELL, who has been abroad, is expected back in season to resume his duties as sub-master in the Dwight School.

SCHOOL matters are far from being settled. The Normal School question is another vexed question. Mr. Larkin Dunton is re-elected, by a good vote, to the mastership. Now that they have organized a school on a basis that can do much better work than ever before, it seems hardly possible that a backward step will be taken.

THE school board have passed orders asking for additional school accommodations for the Minot School, for the Dorchester Primary Schools, the Oliver Primary School, and the Washington Village Grammar School.

CAMBRIDGE. — Harvard admitted 181 students at the recent examinations.

ONE hundred and fifty candidates applied for admission to the High School. The High School of this city has no superior in the State, as regards breadth and depth of culture furnished.

CHARLESTOWN. — The school exhibitions were this year of more than usual interest and merit. One hundred and forty-seven pupils from the Grammar Schools, and three from private schools, were admitted to the High School.

MR. J. L. STANLY, principal of the Bradford High School, has been appointed sub-master in the High School in place of Mr. Brown, resigned.

MISS MARY E. FLANDERS has been appointed teacher of a Primary School.

SOMERVILLE — The High School, taught by Mr. Geo. L. Baxter, gave its twenty-first annual exhibition. Mayor Geo.O. Barstow was present, with several prominent educators. The exercises were a mixture of examination and exhibition. The pupils did their part well, and Edmunds' band enlivened the occasion with cheerful music. Four of the graduates were admitted to Harvard College this year.

THE Grammar School exhibitions were exceedingly creditable to the city.

NEWTON. — The school committee has abolished four of the eight Grammar Schools in this town, thus increasing the size of the remaining four, and fixed the salaries of the masters at $2,200.

HYDE PARK. — It was our privilege to spend a day in the schools of this town. It is a wonder how a town so young can have a school system so perfect. There are four buildings of equal size, and the number of scholars varies but little. The four masters, Wiggin, Fellows, Brown, and Gould, are not only first-class teachers, but each has the ability and disposition to grasp the entire system, and execute it as though it were his own. Each building contains all the pupils of the district be-

low the High School grade, and from the Primary School to the graduation from the Grammar School — eight classes — the Grammar master has the entire control. The associate teachers seem to breathe in the spirit of the system, and as a result the pupils get along rapidly and yet thoroughly.

ANDOVER. — Mr. F. W. Tilton, for the past two years principal of Phillips Academy, has resigned to accept the principalship of the new High School at Newport, R. I., at a salary of $3,500. Rev. Cecil F. P. Bancroft, who succeeds him, is a graduate of Dartmouth, and was for five years principal of an Academy at Lookout Mountain, Tenn. He is at present travelling in Europe. He brings to his new field of labor, ripe scholarship and practical experience.

MR. W. W. EATON, teacher of Greek and Latin, retires from the faculty for the purpose of travelling in Germany. Mr. Edward G. Coy, tutor in Yale, succeeds him. Mr. H. P. Starbuck, teacher of the junior class, resigns to study civil engineering. Mr. John M. Tyler, son of Prof. Tyler, succeeds him.

MR. F. E. THOMPSON, for the last two years assistant in the English department, leaves to take a special course in Chemistry, at Harvard. Mr. M. C. McCurdy succeeds him. Only two of the teachers of last year remain, — Mr. La Roy F. Griffin, principal of the English department, and Mr. Taylor, teacher of the middle class.

NASHUA, N. H. — Mr. J. W. Allard, superintendent, is doing active service in the reform of the school system. Mr. E. H. Davis, his predecessor, laid a good foundation, and he is building well thereon. Mr. Huzzey, the High School principal, is earnestly engaged in the work, having made a most creditable school, but the demand is for better buildings for the lower schools.

If these workers remain long in the city, there is little doubt but ample accommodations will be furnished.

GENERAL.

THE East Needham High School has closed a prosperous year, under the management of Mr. H. B. Lawrence.

WATERTOWN is having a new High School building, retaining the present building as an L. —— Woburn has just completed a new High School house. Supt. Davis succeeds admirably in carrying out the plans of his predecessor, Mr. Emerson. He has some first-class teachers.

REV. H. L. EDWARDS, of Middleboro', has been elected superintendent of schools in Northampton. Mr. Edwards was long chairman of the committee in Middleboro'.

THE Normal School examinations were of usual interest, and as well attended as ever. We hear good reports from each, but have no specific reports from either.

THE High School graduation in Melrose was a most successful occasion. The advent of Mr. J. O. Norris, of the English High School, Boston, upon the committee, will to some extent repair the loss sustained by the resignation of Mr. Leighton, of the High School.

PROF. JOHN R. HERRICK has resigned the chair of Christian Theology in the Theological Seminary at Bangor, Me.

PROF. MARIA MITCHELL, of Vassar College, has sailed for Europe to spend the summer.

Books.

NATURE AND UTILITY OF MATHEMATICS. By Charles Davies, LL. D. Published by A. S. Barnes & Co.

We have read this work carefully, and find in it many things to approve. The closing chapters especially, on "The Utility of Mathematics," are well written, and present the advantages of a thorough study of mathematics in their true light. In discussing the order of a course in mathematics, Mr. Davies takes the ground that algebra should precede geometry, "because the elementary processes (in algebra) do not require in so high a degree the exercise of the faculties of abstraction and generalization." What those who advocate the study of geometry by children of five to ten years of age, mean by the study of geometry is the learning of the definitions of someof the technical terms used in geometry, committing to memory a few geometrical truths, and gaining a little knowledge of geometrical form. To this, we presume, no one would seriously object; but to our mind this is as far from the study of geometry as learning the definitions in a speller is from investigating the laws of psychology in which these words may be used. We think Mr. Davies is quite right in this order, viz.: arithmetic, algebra, geometry, trigonometry, surveying, etc. This naturally leads us to ask why in this book he did not preserve the same order, and discuss algebra between arithmetic and geometry. The typographical appearance of the book is excellent; though for the sake of appearance a great deal of valuable space has been sacrificed, and often the heads or statements of topics in the margin are (*more hibernico*) not heads at all; for example, on pages 252–5, though the suggestions are numbered with Arabic figures, in the margin stand the words "first," "second," up to "sixteenth." On page 172 the line reads, "Now, this analysis is perfectly satisfactory to a child," and in the margin stands "Satisfactory to a child." We do not suppose that this book was intended as a school-book, but rather for the reading of mature minds. Therefore we should consider it an improvement to reduce the number of pages to three quarters the present number, by removing the marginal heads, which occupy one inch of the four in width of each printed page. For such a book, too, we think the subject of arithmetic has been spread altogether too thin. It occupies nearly as much space as geometry, algebra, and the calculus together.

We must take exception to the classification on page 98. To make number and space the two grand divisions of quantity does not seem philosophical. Number is the representative of quantity. Numbers are "symbols by which quantitities may be represented" (page 351). "All quantity, made up of definite parts, can be numbered exactly or approximately, and in this respect possesses the properties of number" (page 258). Number, then, is not one of the two divisions of quantity. Again, on page 99, Mr. Davies divides number into four divisions, viz.: abstract, currency, weight, time; though on page 100 he gives the proper division of number, viz.: abstract and concrete. Concrete numbers would also include units of currency weight, and time; but why not also units of length, surface, volume, or any other units of whatever denomination you please? And again, do not units of currency and weight belong under space? According to United States law (1866), the new five-cent coin must weigh five grams, and must have a diameter of twenty millimeters. Now, a gram is the weight of a

thousandth part of a liter of water, and a liter is a cubic decimeter. Thus units of currency and of weight both go back to the unit of volume; and the unit of volume and of surface depends upon the linear unit. The two grand divisions of quantity are time and space. Time, therefore, cannot be one of the subdivisions of number.

We cannot see why to illustrate a principle it was necessary to introduce *all* the tables of weight and of measure. If the space thus taken had been given to a discussion of the utility of the metric system, and its great advantages over our present multiform, complicated tables, we believe it would have been wiser.

The use of the word *proportion* for the relation of two quantities to one another, though common "in popular language" (see Webster, under ratio), is not sanctioned by mathematicians generally; nor do English or American mathematicians adopt the French system of considering the antecedent the divisor. With the exception of the argument from geometrical progression, we do not see that Mr. Davies' reasoning has any weight. Ask the first intelligent person you meet, "What is the ratio of two to eight?" "Two to eight? Why, two is one quarter of eight." But, says Mr. Davies, in this case "we divide our standard." This depends upon which quantity we take for the standard. We take *the other*. Another argument, says Mr. Davies, for the French method is, that "In the rule of three, we have this clear and simple solution; viz.: that the unknown term, or answer, is equal to the third term multiplied by the ratio of the first two." Substitute *divided* for *multiplied*, and we have an equally clear and simple rule by the English method. To offset the argument from progression, we would suggest that the sign : is usually considered identical with the sign for division ÷, with the line omitted. Now no one thinks 2÷8 means 8 divided by 2. Among our own mathematicians the English method is so universal that it may be called a *convention*. Nor again do we agree with Mr. Davies in believing that in an arithmetic the rule of three should precede percentage, interest, discount, etc. It is true that examples in all these subjects can be worked by the rule of three; but we don't believe Mr. Davies himself (we have not his arithmetic to refer to) would recommend working examples in interest — not to say in partial payments — by the rule of three. This is not the way with business men. There is no more of separate analysis (see page 182) without the rule of three than with it. The reason why percentage, interest, etc., should come as soon as possible in an arithmetic is, that these are subjects which every one ought to understand. The rule of three can be applied to finding how much three sticks of candy would come to at a cent a stick; but it does not follow that a boy should not be allowed to buy his candy, reckon how much he must pay for it, and eat it too — before he learns the rule of three.

Mr. Davies says (page 244), A$\propto$B is read "A proportional to B." We think it is read A *varies* as B; *varies* is the correct mathematical language.

All that Mr. Davies says about the accuracy of definitions is true; and yet, of two definitions, one open to criticism, the other above criticism, the former may be better for an elementary book, conveying at once to the mind of a child the intended meanng; the latter so complicated with limiting or restrictive words and phrases as to distract the attention, and leave the child in an inextricable maze. This is doing exactly what Mr. Davies assented to (page 215) "in elementary works where science has to compromise with a want of intelligence." Take this statement: "Numbers increase from right to left in a tenfold ratio." We object to any such criticism as asking (page 189), Does number, then, have a *right hand* or a *left?* The use of the word *value*, meaning a *representative of value*, we consider perfectly correct

Brevity, if the meaning is clear, even though a critic may pick a flaw, is better than prolixity.

On page 230 Mr. Davies says: "A property of a figure is a mark common to all figures of the same class." For example, a quadrilateral has two obvious *marks*, viz.: it "has four angles and may be divided into two triangles." Why not into a *thousand?*

On page 255 Mr. Davies makes a distinction between *equal*, and *equal in all their parts*, as applied to geometrical figures, using *equal* in the sense of *equivalent*, or equal in surface or volume. We like much better Mr. Davies as he appears in his Legendre, Book IV, Definition 4, where he says, "The term *equal*, when applied to geometrical figures, denotes equality in every respect; and such figures, when applied the one to the other, coincide in all their parts."

On page 268 Mr. Davies discusses the algebraic signs and asserts that "*they* (the signs) *do not at all affect or change the nature of the quantity before or after which they are written.*" This depends upon what you mean by the word *nature*. The quantity is still a *quantity* even if it does have the sign minus prefixed; but has it changed its *nature?* When a man turns from evil and seeks good, the man is still a man, but does he change his *nature?* Is heat of the same *nature* as cold? Is going up and going down of the same *nature?* Debt and credit? Poverty and riches? We are willing to admit that with Mr. Davies' idea of the word *nature* when he wrote the sentence quoted, he was right; but we are not willing to admit that it might not be equally correct to use the word *nature* in referring to the sign of the quantity, and to say that the quantity having its sign changed, changes its *nature* from plus to minus. If, before, it was a desirable quantity to have, if it would increase your property, add to your life or health or happiness, now, having changed its sign (*nature*), it becomes a thief and a robber, steals your property, takes away your life, robs you of health and happiness.

While agreeing with Mr. Davies in most of his statements, and commending his work as a whole, we could not avoid discussing a few of the points to which we take exception. We trust teachers will secure the book and read it carefully.

SELECT ORATIONS OF CICERO. Chronologically arranged, covering the entire period of his public life. Edited by J. H. and W. F. Allen, and J. B. Greenough. Boston: Ginn Brothers. 1873.

The orations contained in this volume are the "Defence of Sextus Roscius" (abridged), the "Impeachment of Verres" (*Actio Prima* and two extracts from the "Actio Secunda"), the oration for the Manilian law, the four "Catiline Orations," the "Orations for Archias, Sestius, Milo, Marcellus, and Ligarius," and the "fourteenth Philippic." Besides the "Notes," which occupy a little more than one third of the volume, there is a short "Life of Cicero," a list of all the orations that are preserved, as well as of Cicero's other writings, a "Chronological Table of Events," and at the end an index to important topics treated of in the notes.

The notes are all very good indeed, if we may judge of the whole by those on the one oration that we have looked through pretty thoroughly. There are not as many of them as are to be found in many editions of Cicero, but there is no "padding." Every remark, we think, with few exceptions, will be made use of by the student, and this is saying a good deal. It is to be noticed that there are very few long translations. Very seldom is a whole sentence translated. Translations of words and phrases, generally very well chosen, are all the help the student must look for in this direction. Much useful information is given on the special meanings of words, and many hints about the course of thought in difficult passages. The "argument" of

each oration is given with the notes. We would call particular attention to the notes on historical and archæological matters which seem to us to be extremely valuable: as, for instance, an account of the Roman aristocracy, on page 19; remarks on adoption, page 92; a description of the course of business in the senate, page 79, and the like. All these things can be found, of course, in histories and dictionaries of antiquities, but to insist, as some teachers do, on the pupil's referring to such works at every step of his progress, is to insist upon what few are likely to do, and fewer still are able to do. We can afford to help the student a great deal in such matters, and still leave him plenty of hard work to do.

Grammatical references are frequently made to Allen and Greenough's Latin Grammar. We are well satisfied that this work will take its place among the very best editions of the Latin classics. It is hard for the critic to find any fault with it that is worth mentioning.

HAP HAZARD. By Kate Field. Published by James R. Osgood & Co.

A pleasant book to take up during vacation. It may be read as its title indicates; and, with its incidents and anecdotes, will be found an interesting companion.

JOHN STUART MILL: HIS LIFE AND WORKS. A Memorial. Published by James R. Osgood & Co.

A worthy tribute to one of the greatest thinkers of this or any age, by Herbert Spencer, Henry Fawcett, Frederic Harrison, and other distinguished authors who knew him well, and whose appreciation of him shows that this man of severe critical habits had, withal, "the genius to be loved."

We confess the perusal of this memorial has invested one whom we had imaged as a kind of walking "outline of the laws of thought," with qualities which add a charm to his character. The cold severity of his thought is melted in the love he bore to his wife and friends.

SWINTON'S WORD PRIMER Published by Ivison, Blakeman, Taylor & Co.

This little book, intended for children who have gone through some reading primer, contains a good selection of common words, grouped, to a considerable extent, according to leading ideas; as "names of playthings," "things we eat," "things in the kitchen," "things worn," etc. One feature especially to be commended is the shortness of the lessons.

We don't like putting misspelled words before the eye of the pupil. We think the artist who refused to look upon a bad picture was right, and his reasons for it apply with equal force to a spelling-book. On the whole, we like the selection of words, and the general features of the book.

A CHANCE ACQUAINTANCE. By W. D. Howells. Published by James R. Osgood & Co.

The beautiful style and graphic description give an interest and charm to this book, which holds the attention without the aid of startling incidents or sensational extravagance.

The characters are well drawn and clearly distinguished. We suppose that most young novel-readers who read merely for the story, would pronounce it a failure. But for readers who can appreciate the sentiment, the style, and the nice discrimination of character, with its quiet humor and good-natured hits at Mr. Arbuton, who was not exactly Mr. Ellison's ideal of a Boston man, and still further from that of some of our Southern brethren, it will be found very interesting and suggestive.

RECREATION — THE SCHOOL STAGE.

Messrs. Wilson, Hinkle & Co. (Cincinnati and New York) have just published *Venable's School Stage*, a Collection of Juvenile Acting Plays, for school and

home. Sent by mail post-paid on receipt of price, $1.25. A fuller announcement will appear in the next number of this journal.

A Grammar of the Latin Language. By G. R. Bartholomew. Wilson, Hinkle & Co., Cincinnati and New York.

This work is designed to be a complete Latin Grammar, for class use in schools and colleges. It gives the Roman pronunciation as now taught in Harvard College; it presents the inflections of verbs before the nouns and adjectives, classifying the verbs as vowel conjugations (including the A, E, and I verbs) and consonant conjugations, arranging the synopses of verbs by modes, tense-systems, and stems, and illustrating the whole subject of conjugations by numerous examples; it gives the original case-endings of the declensions, with the affixes and changes made in forming the inflections, presenting the cases in the order, nominative, vocative, accusative, genitive, dative, ablative; it does a good thing in substituting a single alphabetical list of irregular nouns and exceptions in place of the numerous scattered lists commonly given; it gives a clear exposition of modes and tenses, and presents syntax in a very compact form, free from the multitude of exceptions and observations which some grammars contain.

The book appears to have been prepared with much care. Teachers of Latin will certainly find it profitable to examine the work.

What to Wear? By Elizabeth Stuart Phelps. Published by James R. Osgood & Co.

This is an earnest protest against the present styles of female dress, on industrial, æsthetic, and moral grounds. We wish it might be read and heeded, at least by those who are so earnest in their efforts to obtain for woman her educational and political rights. We confess that nothing dampens our ardor so much, in seeking to secure these rights, as the blind obstinacy with which even our most intelligent women follow the most unreasonable fashions. To see an advocate of woman's rights on the platform, putting one in constant fear of an accident from her treading on the yard of silk which she persists in dragging after her, is not very edifying.

While perfectly willing to give women their political rights, we believe that emancipation from French milliners and certain social laws and customs, for which men are not responsible, would do much more for the well-being of the sex, and hasten the reform sought. We commend this book to the attention of every thoughtful woman.

A Tour of the World in Eighty Days. By Jules Verne. Published by J. R. Osgood & Co.

This book is perfectly unique — if we except "Twenty Thousand Leagues under the Sea," by the same author — in its subject, its incidents, and its manner of treatment. Phileas Fogg, the most imperturbable of mortals, of whom we know little except that he was a member of the Reform Club, and had twenty thousand pounds at Baring Brothers, undertakes, on a wager, to do what the "Morning Chronicle" had stated could be done, — make the tour of the world in eighty days. The suggestion that this did n't take into account "bad weather, contrary winds, shipwrecks, running off the track, and so on," was met by the reply from Fogg, that "the unforeseen does n't exist," that "a well-used minimum suffices for everything." This he proved, at least in this case, by playing off the fertility of his expedients against all such contingencies. The book should be begun early in the day, for no reader finds a place where he can stop. There is no more rest for the reader than if he were making the trip on time.

May. By Mrs. Oliphant. Published by Scribner, Anthony & Co.

Decidedly the best of the stories of this popular novelist. The interest of the

plot, and the well-marked and strongly contrasted characters, make it peculiarly interesting, while the quaint Scotch humor gives it a higher zest. It is a pleasant book to take to the sea-shore or the country, during the vacation.

PROF. WALTER SMITH'S DRAWING-BOOKS. Published by James R. Osgood & Co.

These books contain a great variety of excellent examples in free-hand outline, many of which are historical, the subjects being taken from various national ornaments.

The work will be one of much value to teachers, from its multitude of examples, as well as their classical character. Teachers have long felt the want of a variety of suitable examples in our schools.

As to the plan of the work and the arrangement, there is perhaps room for criticism. The small spaces to draw in, and the skeleton frame, with a half or quarter figure in print, and the remainder with pencil, by the scholar, may be a good device, where the teaching is deficient and lax, but is hardly consistent with a thorough training in the art of drawing.

In fact, good, well-trained scholars, even of tender age, need no such helps; and it may be questioned whether poor scholars would become good and proficient by such means. This arrangement seems to presume too little talent in the scholar, and is not especially progressive. This seems to be a prominent fault of the work. For example, No. 2 begins with very difficult curves; simple and compound curves, spirals, and circles on the first page, with ellipses and ovals on the second; while on the 6th and 8th are simple figures, some in straight lines suited to the smallest children.

There seems but little room for execution on some pages; others are not so objectionable on that account.

We do not understand the place for No. 1. It seems to be designed for beginners, in part, at least, — but for them it seems wholly inadequate, both in matter and arrangement.

It is deficient in simple examples in straight lines, and jumps immediately to polygons with their hard names, — a subject which should be deferred to a much later period in the scholar's development. We are confident that it is not well to bother the little ones with the hard names of science in connection with their first efforts. In short, we do not know of any place in our schools where we need or could conveniently use No. 1.

THE AMERICAN EDUCATIONAL READERS. Arranged and graded for the use of schools. Pub. by Ivison, Blakeman, Taylor & Co.

Another series of reading-books, and, judging by a pretty careful examination, we are inclined to think the series will commend itself to teachers. The motto of the First Reader, "Pictures, Words, Letters," is the true order of teaching reading, and the book is, in all respects, such that it can hardly fail to please both teacher and pupil. The pictures are excellent, both as pictures and as illustrations of the text; and the pupil easily associates the meaning of the sentences with his conception of the picture. In this way, words become to the child the signs of ideas from the beginning, and he will read well from the very fact that he understands and is interested in what he is reading. The lessons in the several readers seem to be well graded and interesting, and we have no doubt that this will become one of our most popular series of reading-books.

BOOKS RECEIVED.

THE LIBERAL EDUCATION OF WOMEN. By James Orton. Published by A. S. Barnes & Co.

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